

## REMARKS/ARGUMENTS

Claims 1-12 and 14-25 remain in the application, all of which stand rejected.  
Claim 13 was previously canceled.

### 1. Rejection of Claims 1-12 and 14-25 Under 35 USC 112

Claim 1-12 and 14-25 stand rejected under 35 USC 112, second paragraph, as being indefinite. Thereafter, the Examiner asserts that the specification does not contain sufficient information to enable the recitation of "an electronic test instrument". See, 5/11/2009 Office Action, p. 2. In essence, it would appear that the Examiner is attempting to make the case that the claims are indefinite (under 35 USC 112, second paragraph) because they are not enabled (under 35 USC 112, first paragraph). Yet, an assertion of one rejection does not make a prima facie case for another rejection.

As the Office Action is written, applicant cannot ascertain whether the claims are rejected under 35 USC 112, first paragraph; 35 USC 112, second paragraph; or both.

With respect to indefiniteness, MPEP 2171 states, "The second requirement [i.e., 35 USC 112, second paragraph] is an objective one because it is not dependent on the views of applicant or any particular individual, but is evaluated in the context of whether the claim is definite - i.e., whether the scope of the claim is clear to a hypothetical person possessing the ordinary level of skill in the pertinent art." Applicant asserts that the meaning of the phrase "electronic test instrument" would be clear to a PHOSITA. For example, attached hereto is a description of "electronic test equipment" available on [www.wikipedia.org](http://www.wikipedia.org).

With respect to enablement, applicant asserts that a PHOSITA would clearly understand how to construct a multitude of "electronic test instruments".

For at least the above reasons, applicant requests the withdrawal of any and all rejections under 35 USC 112.

## 2. Rejection of Claims 1-10, 14-16 and 18-23 Under 35 USC 103(a)

Claims 1-10, 14-16 and 18-23 stand rejected under 35 USC 103(a) as being unpatentable over Loveland (US Patent No. 6,782,413).

With respect to claim 1, the Examiner admits that Loveland fails to disclose an "electronic test instrument" but asserts that it is well known that computers can test networks. However, the Examiner has not made a case for why it would have been obvious to specially configure the computer disclosed in Loveland as an "electronic test instrument". Absent such a showing, applicant does not believe the Examiner has made a prima facie case for rejecting claim 1. Claim 1 is believed to be allowable for at least this reason.

Claims 5 and 10, as amended, are believed to be further allowable over claim 1. More specifically, Loveland does not teach a voice module that is built into the chassis of an electronic test instrument. At best, Loveland discloses 1) a computing device 130 that receives data, and 2) a separate telephone 137 that receives voice data.

Claims 2-10, 14-16 and 18-23 are believed to be allowable, at least, because each of these claims ultimately depends from claim 1.

## 3. Rejection of Claims 11, 12, 17 and 24 Under 35 USC 103(a)

Claims 11, 12, 17 and 24 stand rejected under 35 USC 103(a) as being unpatentable over Loveland (US Patent No. 6,782,413).

Applicants assert that claims 11, 12, 17 and 24 are allowable, at least, because each of these claims ultimately depends from claim 1, which is believed to be allowable for the reasons set forth in Section 2 of these Remarks/Arguments.

#### 4. Rejection of Claim 25 Under 35 USC 103(a)

Claim 25 stands rejected under 35 USC 103(a) as being unpatentable over Loveland (US Patent No. 6,782,413) in view of Lashley et al. (US Patent No. 7,003,085; hereinafter "Lashley").

Claim 25 is believed to be allowable, at least, for reasons similar to why claim 1 is believed to be allowable, and because Lashley fails to disclose that which is missing from Loveland.

#### 5. Conclusion

In light of the amendments and remarks provided herein, applicant respectfully requests the issuance of a Notice of Allowance.

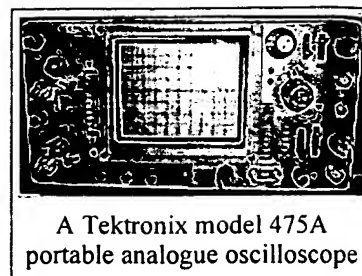
Respectfully submitted,  
HOLLAND & HART, LLP

By: /Gregory W. Osterloth/  
Gregory W. Osterloth  
Reg. No. 36,232  
Tel: (303) 295-8205

# Electronic test equipment

From Wikipedia, the free encyclopedia

**Electronic test equipment** (sometimes called "testgear") is used to create signals and capture responses from electronic Devices Under Test (DUTs). In this way, the proper operation of the DUT can be proven or faults in the device can be traced and repaired. Use of electronic test equipment is essential to any serious work on electronics systems.



Practical electronics engineering and assembly requires the use of many different kinds of electronic test equipment ranging from the very simple and inexpensive (such as a test light consisting of just a light bulb and a test lead) to extremely complex and sophisticated such as Automatic Test Equipment.

Generally, more advanced test gear is necessary when developing circuits and systems than is needed when doing production testing or when troubleshooting existing production units in the field.

## Contents

- 1 Types of test equipment
  - 1.1 Basic equipment
  - 1.2 Advanced or less commonly used equipment
    - 1.2.1 Probes
    - 1.2.2 Analyzers
    - 1.2.3 Signal-generating devices
  - 1.3 Miscellaneous devices
- 2 See also
- 3 External Links

## Types of test equipment

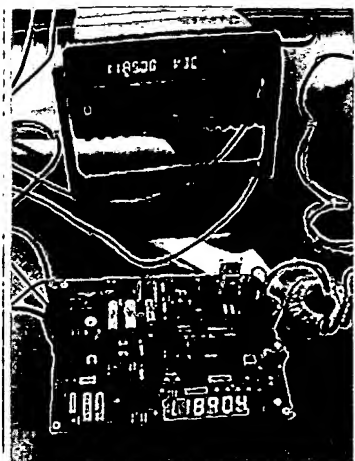
### Basic equipment

The following items are used for basic measurement of voltages, currents, and components in the circuit under test.

- Voltmeter (Measures voltage)
- Ohmmeter (Measures resistance)
- Ammeter, e.g. Galvanometer or Milliammeter (Measures current)
- Multimeter e.g., VOM (Volt-Ohm-Milliammeter) or DVM (Digital "Volt" Meter) (Measures all of the above)

The following are used for stimulus of the circuit under test:

- Power supplies
- Signal generator



Agilent commercial digital voltmeter checking a prototype

- Digital pattern generator
- Pulse generator

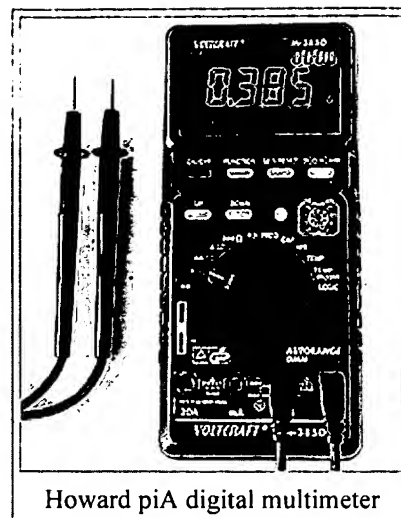
The following analyze the response of the circuit under test:

- Oscilloscope (Measures all of the above as they change over time)
- Frequency counter (Measures frequency)

And connecting it all together:

- Test probes

### Advanced or less commonly used equipment



Howard piA digital multimeter

### Meters

- Solenoid voltmeter (*Wiggy*)
- Clamp meter (current transducer)
- Wheatstone bridge (Precisely measures resistance)
- Capacitance meter (Measures capacitance)
- LCR meter (Measures inductance, capacitance, resistance and combinations thereof)
- EMF Meter (Measures Electric and Magnetic Fields)
- Electrometer (Measures charge)

### Probes

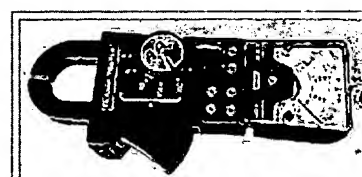
- RF probe
- Signal tracer

### Analyzers

- Logic analyzer (Tests digital circuits)
- Spectrum analyzer (SA) (Measures spectral energy of signals)
- Protocol analyzer (Tests functionality, performance and conformance of protocols)
- Vector signal analyzer (VSA) (Like the SA but it can also perform many more useful digital demodulation functions)
- Time-domain reflectometer for testing integrity of long cables

### Signal-generating devices

- Signal generator
- Frequency synthesiser
- Function generator
- Digital pattern generator
- Pulse generator

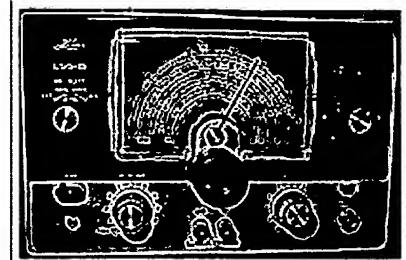


A multimeter with a built in clamp facility. Pushing the large button at the bottom opens the lower jaw of the clamp, allowing the clamp to be placed around a conductor (wire).

- Signal injector

### Miscellaneous devices

- Continuity tester
- Cable tester
- Hipot tester
- Network analyzer (used to characterize components or complete computer networks)
- Test light
- Transistor tester
- The Energy Detective



Leader Instruments LSG-15 signal generator.

### See also

- Automated Test Equipment

### External Links

- LXI Consortium website
- NIST's 1588 Standard web site

Retrieved from "[http://en.wikipedia.org/wiki/Electronic\\_test\\_equipment](http://en.wikipedia.org/wiki/Electronic_test_equipment)"

Categories: Electronic test equipment

---

- This page was last modified on 24 July 2009 at 08:25.
- Text is available under the Creative Commons Attribution/Share-Alike License; additional terms may apply. See Terms of Use for details.  
Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a non-profit organization.